

Helping Massachusetts Municipalities Create a Greener Energy Future



COMMONWEALTH OF MASSACHUSETTS

*Deval L. Patrick, Governor
Richard K. Sullivan, Jr., Secretary
Mark Sylvia, Commissioner*

**Making the Most of a Municipal
Energy Audit**

Aimee Powelka

Municipal Efficiency Coordinator

Green Communities Division

Webinar

January 5, 2011

10:00 am

Green Communities Division

Serves as the hub for all Massachusetts cities and towns on energy matters



Green Communities Division Programs & Resources for Municipalities

- Green Communities Grant and Planning Assistance Program
- MassEnergyInsight Energy Tracking and Analysis Tool
- Municipal Energy Efficiency Program
- Energy Management Procurement Assistance

Eileen McHugh, Eileen.McHugh@state.ma.us

- ARRA Stimulus Funding
- Website filled with tools & resources for municipalities:
- Email updates via listserv – Sign up today by sending an email to:

www.mass.gov/energy/greencommunities

join-ene-greencommunities@listserv.state.ma.us

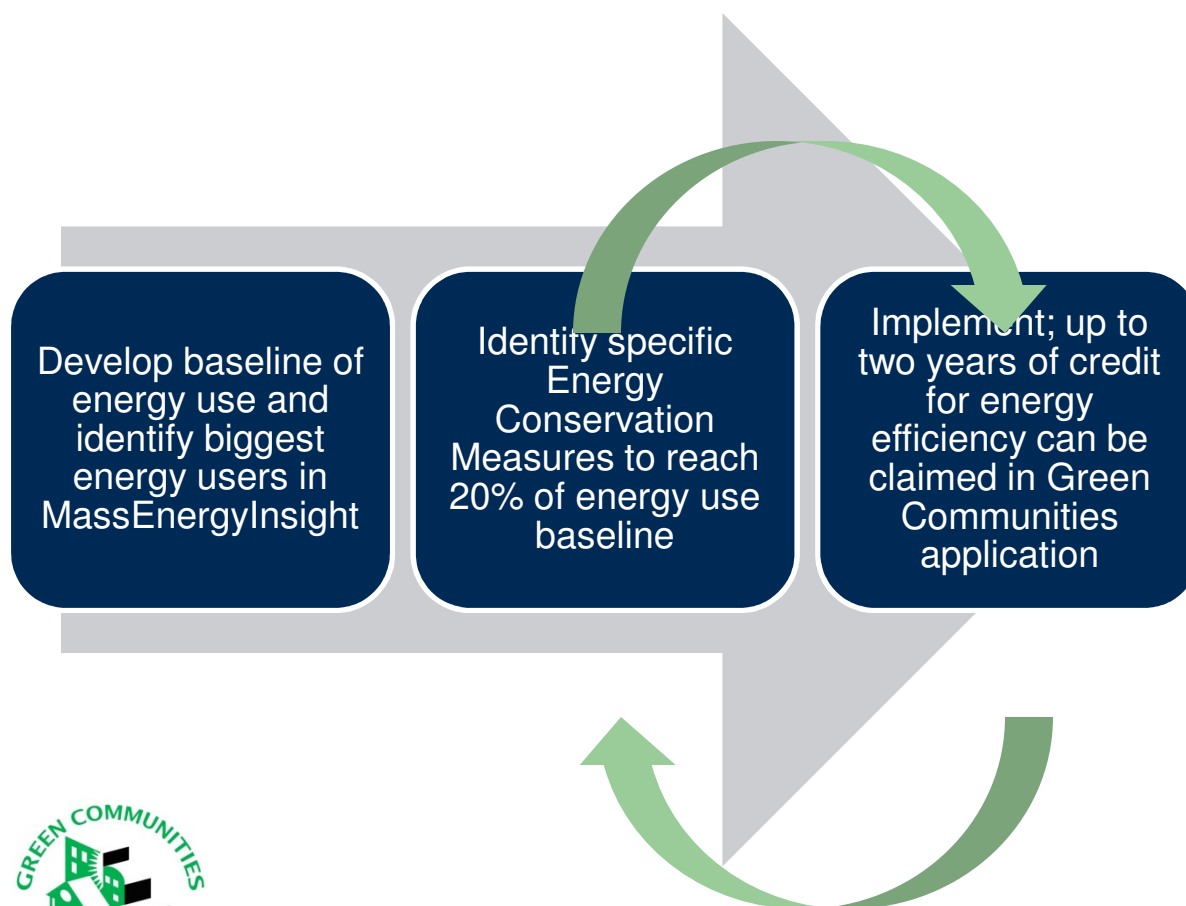


Helping Massachusetts Municipalities Create A Greener Energy Future



Energy Audits Enable Green Communities

41 of 53 Green Communities participated in the Energy Audit Program



Helping Massachusetts Municipalities Create A Greener Energy Future

OUTREACH - REGIONAL COORDINATORS

- Regional Coordinators act as direct liaisons with cities and towns on energy efficiency and renewable energy activities
- Located at each of the DEP Regional Offices:

SERO – LAKEVILLE: Seth Pickering

- Seth.Pickering@state.ma.us

NERO – WILMINGTON: Joanne Bissetta:

- Joanne.Bissetta@state.ma.us

CERO – WORCESTER: Kelly Brown

- Kelly.Brown@state.ma.us

WERO – SPRINGFIELD: Jim Barry

- Jim.Barry@state.ma.us

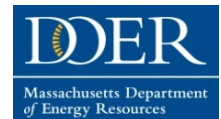


Recording & Presentation

- The webinar is being recorded and will be available and will be posted on our website in approximately 48 hours at:
www.mass.gov/energy/greencommunities
- The slide presentation will also be posted at:
www.mass.gov/energy/greencommunities
- Websites are also listed at end of presentation



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Making the Most of a Municipal Energy Audit

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Why Energy Efficiency?

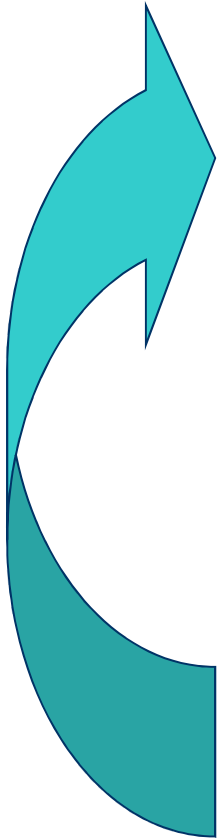
- Join the half of Mass municipalities that have signed up for an energy audit since 2008
- Save money
- Demonstrate community fiscal responsibility
- Save municipal jobs
- Increase energy independence and security
- Create local construction jobs
- Improve occupant/worker comfort and productivity



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Making the Most of An Energy Audit



1. Track your energy usage
2. Discuss your goals, resources and potential funding sources
3. Meet with your Program Administrators/utilities to define the audit services
4. **Conduct an audit**
5. Create a plan
6. Implement



Franklin: Re-investing in EE

2006 Schools
Audit

- 40 efficiency measures (5 VFDs, 20 CO₂ demand control, 15 lighting)
- 396,083 kWh + 25,560 therms natural gas
- Net Cost \$181,801 / savings \$77,156 = 2.4 year payback

2007-2008
Implementation

- Goal was 10% energy savings
- Benchmark: compare energy use FY07 vs FY10
- Saved 9-18% electricity and 0-27% gas



Horace Mann Middle

2010 Schools
Audit

- Identified more potential energy savings (HW pumps, CO₂ demand control)
- 151,235 kWh + 98,711 therms natural gas
- Net cost \$137,153 / savings \$168,963 = 0.8 year payback

2011 and
beyond

- Implement identified measures
- Walk-in coolers
- Next few years, general LED lighting



Parmenter Elementary



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Poll

My town/organization has:

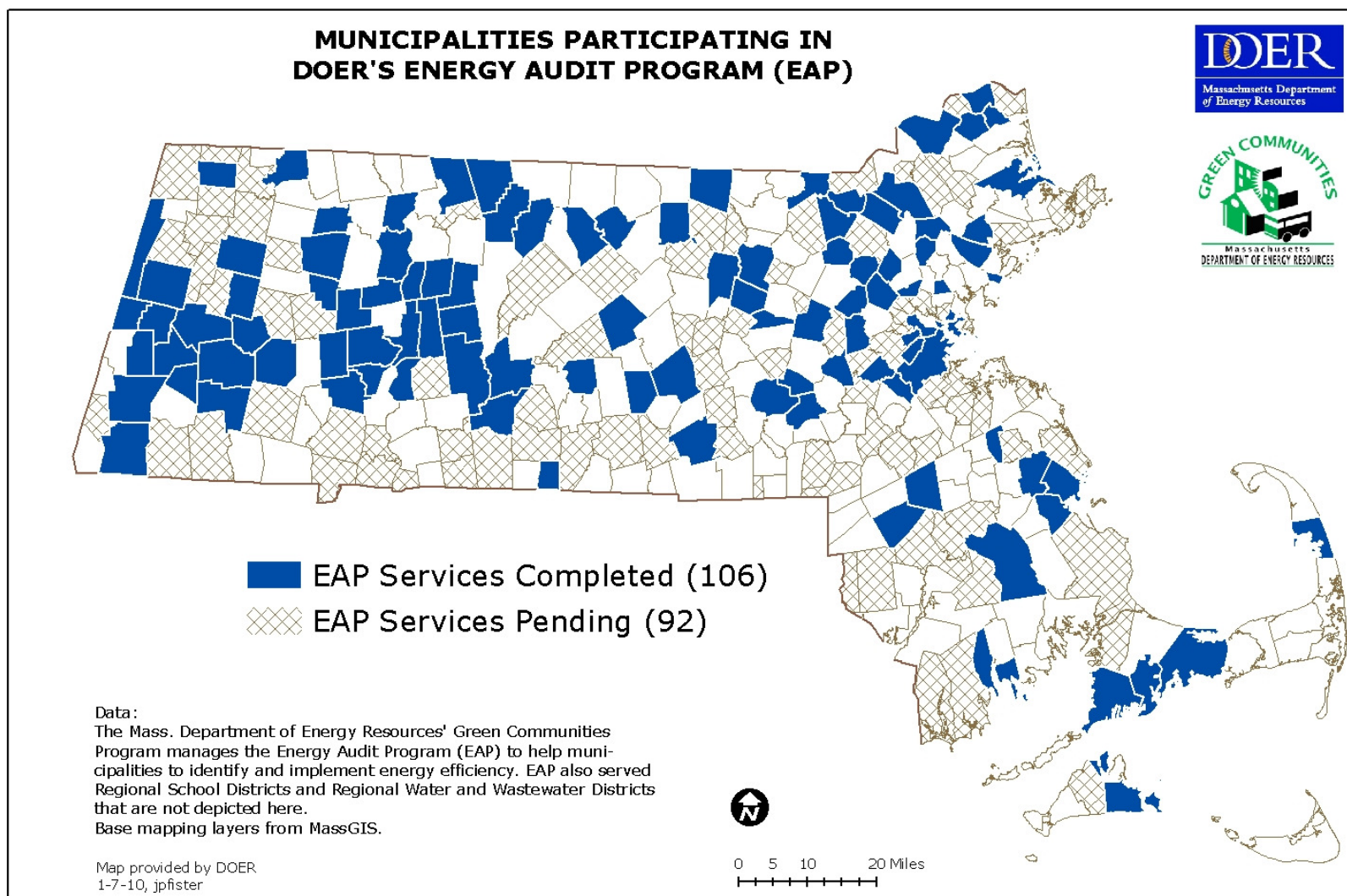
- a. Already implemented all of its audit recommendations
- b. Had an audit in the last two years
- c. Signed up for an audit
- d. Is thinking about having an audit
- e. Hasn't begun



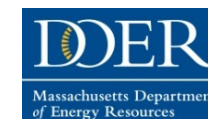
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Mass Munis Receiving Energy Audits



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Making the Most of An Energy Audit



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Understanding Your Electric Bill

Demand

\$

Energy

nationalgrid
www.nationalgridus.com

BILLING PERIOD: Oct 1, 2010 to Nov 2, 2010
ACCOUNT NUMBER: 02212213
METER NUMBER: 02212213
METER TYPE: 104
METER CLASS: 160
METER LOCATION: 16040 kWh

ACCOUNT BALANCE

Previous Balance	5,346.05
Payment Received on OCT 8 (ACH)	- 2,857.99
Balance Forward	2,488.06
Current Charges	+ 791.20
Amount Due	\$ 3,282.06

To avoid late payment charges of 0.87%, \$ 3,282.06 must be received by Dec 27, 2010.

PAYMENT CONCERNS? Want help to help you. We have several plans that can help you manage your energy bills. Go to www.nationalgridus.com paymentoptions to find out more or call us at the number on your bill.

DETAIL OF CURRENT CHARGES

Delivery Services

Type of Service	Customer Reading	Previous Reading	Change	Rate	Total Usage
Energy	17024	16820	204	160	16540 kWh
Total Energy					16540 kWh

Demand 51.2 kW

Billed Demand 51.2 kW

Electric Usage History

Month	kWh	Month	kWh
Nov-09	16780	Jul-10	16780
Dec-09	16460	Aug-10	16460
Jan-10	22460	Sep-10	22460
Feb-10	16020	Oct-10	16020
Mar-10	16180	Nov-10	16180
Apr-10	16840	Dec-10	16840

Billed Demand Last 12 months

Max	55.0
Min	51.2
Average	52.250

Customer Charge 16.50
Distribution Charge 0.0069/167 x 16540 kWh 116.34
Transition Charge -0.00071 x 16540 kWh -11.62
Transmission Charge 0.01658 x 16540 kWh 282.55
Distribution Demand Chg 8 x 51.2 kW 307.20
Energy Efficiency Chg 0.00438 x 16540 kWh 72.05
Renewable Energy Chg 0.0005 x 16540 kWh 8.32
Total Delivery Services \$ 791.20

nationalgrid
PO BOX 360
Northborough MA 01562

nationalgrid
PO BOX 11737
NEWARK NJ 07101-4737

PLEASE PAY BY Dec 27, 2010
AMOUNT DUE \$ 3,282.06

ENTER AMOUNT ENCLOSED

NATIONAL GRID
PO BOX 11737
NEWARK NJ 07101-4737



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Understanding Your Electric Bill: Energy

Energy (kWh)

- Rates vary by provider, service class, and area
- Rates vary over time
- Energy Efficiency – to Program Administrators
- Renewable Energy – to Mass Clean Energy Center

METER NUMBER 02212913 NEXT SCHEDULED READ DATE Dec 2
SERVICE PERIOD Oct 1 - Nov 2 NUMBER OF DAYS IN PERIOD 32
RATE General Service - Demand G-2 VOLTAGE DELIVERY LEVEL 0 - 2.2 kv

G2

Customer Charge		16.56
Distribution Charge	0.00699187 x 16640 kWh	116.34
Transition Charge	-0.00071 x 16640 kWh	-11.82
Transmission Charge	0.01698 x 16640 kWh	282.55
Distribution Demand Chg	6 x 51.2 kW	307.20
Energy Efficiency Chg	0.00433 x 16640 kWh	72.05
Renewable Energy Chg	0.0005 x 16640 kWh	8.32
Total Delivery Services		\$ 791.20



Electric Usage History			
Month	kWh	Month	kWh
Nov 09	14080	Jun 10	14080
Dec 09	16960	Jul 10	20640
Jan 10	20480	Aug 10	29120
Feb 10	16000	Sep 10	22880
Mar 10	16160	Oct 10	18720
Apr 10	14880	Nov 10	16640
May 10	15840		



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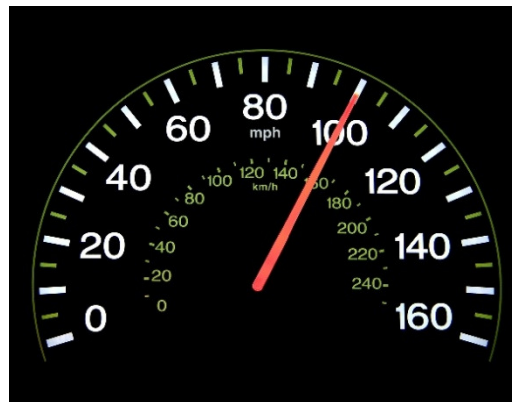


Understanding Your Electric Bill: Demand

Demand (kW)

- Based upon maximum 15 minute time period for each month
- Charges vary by provider
- Specific efficiency measures can target demand

METER NUMBER	02212913	NEXT SCHEDULED READ DATE	Dec 2
SERVICE PERIOD	Oct 1 - Nov 2	NUMBER OF DAYS IN PERIOD	32
RATE	General Service - Demand G-2 VOLTAGE DELIVERY LEVEL 0 - 2.2 kv		
Customer Charge			16.56
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Renewable Energy Chg	0.0005 x 16640 kWh		8.32
Total Delivery Services			\$ 791.20



Billed Demand Last 12 months	
Minimum	46.4
Maximum	96
Average	66.2666

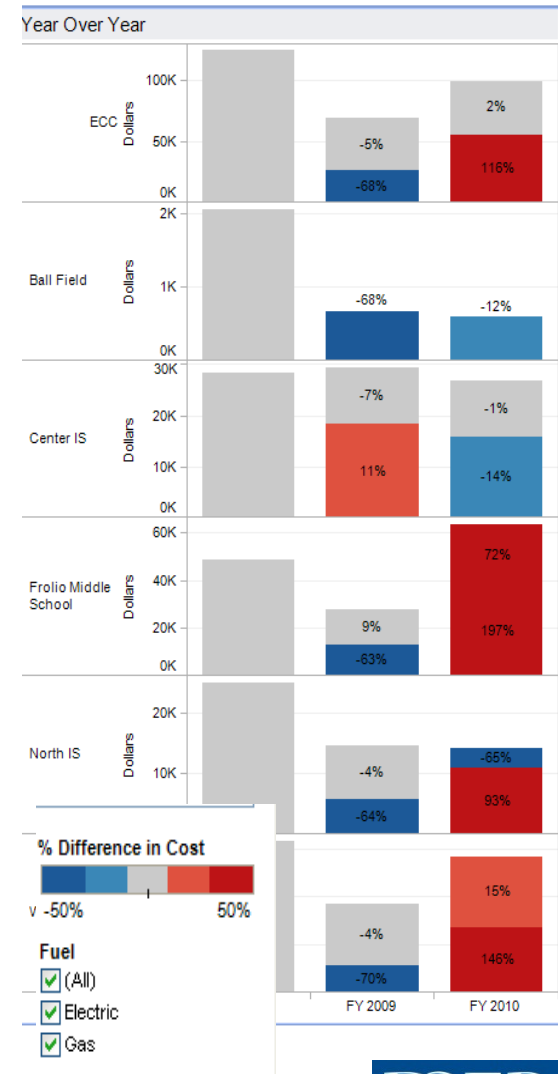


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Why Track Energy Usage?

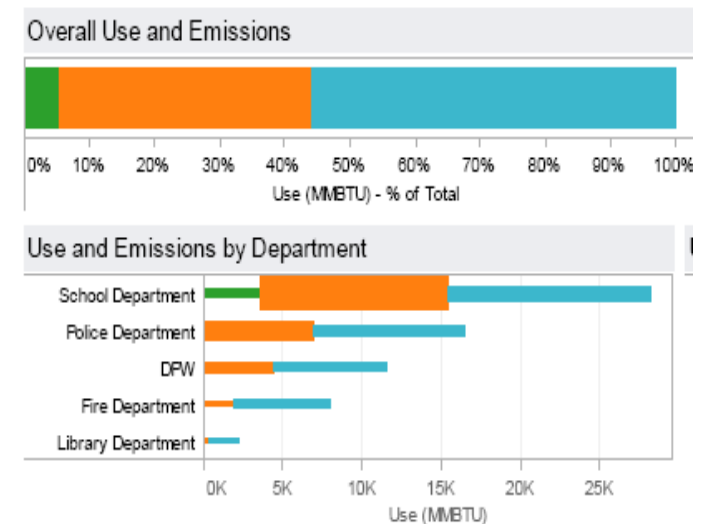
- Save energy
- Minimize demand charges
- Provide information to management
- Budget planning
- Create and track energy-related goals
- Prioritize specific buildings or uses
- Plan for renewables



MassEnergyInsight

● ● ● ● ● POWERING EFFICIENCY

- **FREE** online tool for MA cities, towns, RSD & WTP
- **183** towns and 304 current users
- Provides:
 - Automated electronic download of utility data
 - All energy costs and accounts in one place
 - Standardized and custom reporting
- Use to:
 - Identify least efficient buildings
 - Track your energy use/savings by department, building, or fuel type
 - Generate GHG emissions reduction reports



www.massenergyinsight.net

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Tracking Your Energy Usage: Spreadsheets

- Oil
- Propane
- Gasoline
- Competitive supply costs
- Water flow

	ACCOUNT	Delivery Date	Grade	Gallons	Cost (\$)	per gallon
Oil_02	Junior High	01/25/06	2	7,001	\$13,602.24	1.9429
		03/08/06	2	7,000	\$13,600.30	1.9429
		06/01/06	2	4,000	\$7,771.60	1.9429
		01/26/07	2	7,001	\$13,051.26	1.8642
		02/21/07	2	7,001	\$13,051.26	1.8642
		04/20/07	2	7,000	\$13,049.40	1.8642
		12/17/07	2	7,000	\$19,329.80	2.7614
		01/29/08	2	7,000	\$18,636.80	2.6624
		03/11/08	2	7,000	\$22,192.80	3.1704
		02/03/09	2	6,000	\$9,142.20	1.5237
Oil_03	Middle School	1/25/06	2	7,002	\$13,604.19	1.9429
		3/14/06	2	7,000	\$13,600.30	1.9429
		6/1/06	2	3,000	\$5,828.70	1.9429
		2/14/07	2	7,003	\$13,054.99	1.8642
		4/24/07	2	7,002	\$13,053.13	1.8642
		1/17/08	2	7,001	\$19,847.13	2.8349
		3/1/08	2	7,000	\$20,901.30	2.9859
		2/11/09	2	7,000	\$10,721.90	1.5317



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Next MassEnergyInsight Trainings

MONTH	TOPIC	DATE/TIME
January	Registration deadline	Tuesday, January 4, 2011
	MassEnergyInsight Introduction (<i>required for new users</i>)	Tuesday, January 11, 2011 2:00 PM to 3:15 PM
February	Registration deadline	Wednesday, February 2, 2011
	MassEnergyInsight Introduction (<i>required for new users</i>)	Wednesday, February 9, 2011 10:00 AM to 11:15 AM
	Follow-up Q & A (<i>recommended for new users; open to any authorized user</i>)	Wednesday, February 23, 2011 10:00 PM to 11:15 AM
March	Registration deadline	Monday, March 7, 2011
	MassEnergyInsight Introduction (<i>required for new users</i>)	Monday, March 14, 2011 6:30 PM to 7:45 PM



Helping Massachusetts Municipalities Create A Greener Energy Future



Making the Most of An Energy Audit

1. Track your energy usage



2. Discuss your goals, resources and potential funding sources

3. Meet with your Program Administrators/utilities to define the audit services

4. Conduct an audit

5. Create a plan

6. Implement



Discuss Goals, Resources & Funding

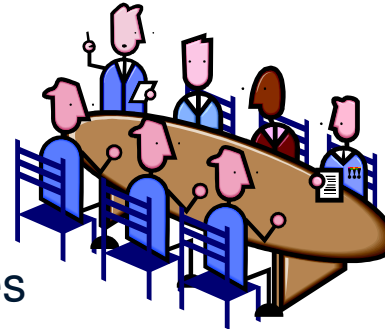
- Goals

- How many buildings?
- How deep?
“Low-hanging fruit” or comprehensive?
- Timeframe?



- Resources

- Internal
- Community
- Program Administrators/Utilities



- Funding

- Capital plan allocations
- Ability & willingness to incur debt
- Performance contract
- Program Administrator incentives
- State / Federal grant programs



No and Low-Cost Measures

- Programmable thermostats and time of temperature setbacks – turn off 30 minutes before vacancy
- Operations & Maintenance: function as designed
- Computer and monitor power management freeware
- Attack Phantom Loads
- Install vending misers
- Turn off equipment
- Lighting
 - Replace any mercury vapor streetlights
 - Replace desktop incandescents with CFLs
 - Convert to LED exit signs and traffic signals



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Poll

- To minimize our costs, we should install solar panels, then address energy efficiency.
- True
- False


Efficiency First



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Making the Most of An Energy Audit

1. Track your energy usage
2. Discuss your goals, resources and potential funding sources
-  **3. Meet with your Program Administrators/utilities to define the audit services**
4. Conduct an audit
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Program Administrators



Electric

National Grid
NStar
Unitil
Cape Light Compact
WMECO

Gas

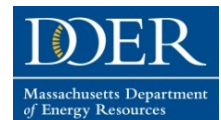
National Grid
NStar
Unitil
Columbia Gas
Berkshire Gas
New England Gas

**Contact your Account Executive for an audit
or details on incentives**

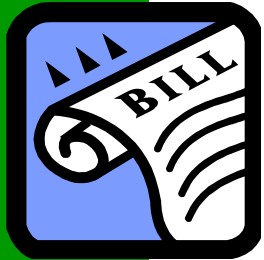
www.masssave.com



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Utilities Provide Your Energy – So Why Would They Help You Use Less?



Green Communities Act of 2008:

- Requires all investor-owned electric and gas utilities and municipal aggregators to procure all cost-effective energy efficiency and demand reduction resources
- Energy Efficiency Program Administrators develop three-year plans with programs and goals
- 2010 – 2012 plan: Program Administrators will invest \$2.1 billion in energy efficiency for a net savings of \$3.8 billion



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Meet With Your Program Administrators to Define Audit Services

- Who Should Attend?
 - Energy manager/champion
 - Director of Facilities/Operations
 - Schools
 - Municipal
 - Water/Wastewater Treatment Plants
 - Financial person
 - Program Administrator/Utility representatives/account executive
 - Green Communities Regional Coordinator

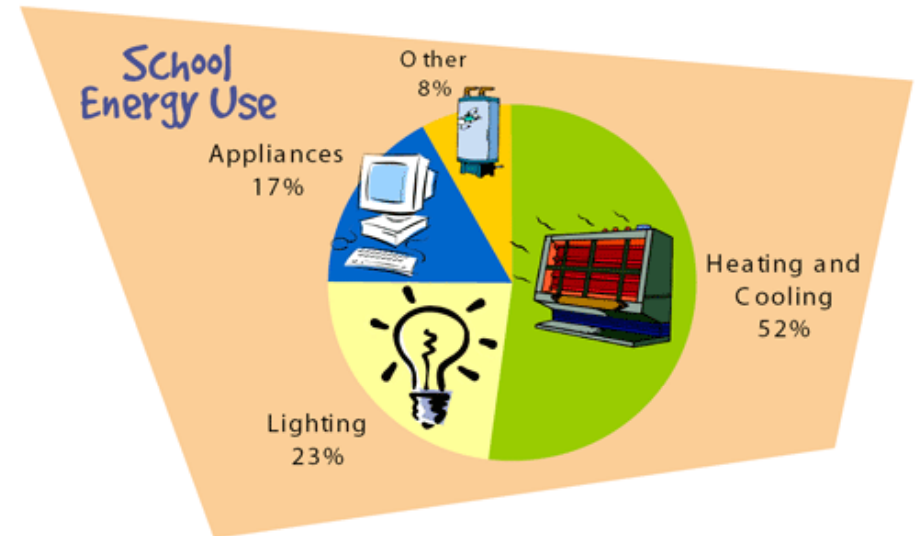


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Meet With Your Program Administrators to Define Audit Services

- Agenda
 - Overview energy use
 - Identify priority buildings
 - Review history of improvements
 - Process & timeframe
 - Next steps



Cost of an Audit

- **Walk-Through Audit (Level 1)**
 - Direct Install through Program Administrators is free audit (<300 kW)
 - Prescriptive measures such as lighting, refrigeration, programmable thermostats
- **Energy Audit (Level 2)**
 - Whole Building Assessment from Program Administrators
 - \$4,000 - \$6,000 for each building, 50% cost-share from Program Administrators may be available
 - More comprehensive: mechanical, EMS, HVAC, heating systems
 - More specific estimates of costs and savings
- **Process Audit/Technical Services (Level 3)**
 - Wastewater & Drinking Water Treatment Plants
 - \$5,000 - \$50,000, cost-share from Program Administrators may be available
- **Investment Grade Audit**
 - Through a Performance Contract
 - Multiple Buildings
 - \$10,000s if Performance Contract is not signed



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Poll Question

My town can't get an energy audit because it has electricity provided by a Municipal Light Plant.

- True
- False



Energy Efficiency for MLP Communities

- Work with your Municipal Lighting Plant (MLP)
- Address gas uses if you have a gas Program Administrator
- Perform own low and no-cost measures
- Use community resources to identify higher cost opportunities
- Investigate a Performance Contract
- Pay for an energy audit; will be able to use pre-approved vendors for energy services on Comm-Pass (www.comm-pass.com)




DOER is Working with MLPs

- Met with Mass Municipal Wholesale Electric Companies to discuss their efficiency programs
- Two MLPs currently provide data for MassEnergyInsight; more can – just ask!
- Continuing outreach at all MLPs



Making the Most of An Energy Audit

1. Track your energy usage
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3. Meet with your Program Administrators/utilities to define the audit services
-  **4. Conduct an audit**
5. Create a plan
6. Implement



Working with an Auditor

- Complete Program Administrator application, if appropriate
- Operations person present to share knowledge of history of upgrades, renovations, improvements and current operating characteristics
- Provide full access to all buildings on day of audit
 - if audit schools during vacations, you may lose the opportunity to see the school & its systems in use



Sample Audit Summary

	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1				Annual Usage Savings					Annual Cost Savings					
2	Building	Project	Cost (\$)	Electrical (kWh)	Fuel Oil (Gal.)	Nat. Gas (CCF)	Other: LPG (Gal)	Total (MMBtu)	Electrical (\$)	Fuel Oil (\$)	Nat. Gas (\$)	Other: LPG (\$)	Total (\$)	Payback (yr)
3	library	lighting upgrades	281	1,750	0	0	0	6.0	210	-	-	-	303	0.9
4	library	motor controls	1,153	730	887	0	0	125.8	88	2,660	-	-	2,748	0.4
5	town hall	control system	410	0	0	147	0	15.1	-	-	232	-	232	1.8
6	town hall	building envelope	12,489	0	0	1,246	0	128.3	-	-	1,968	-	1,968	6.3
7	town hall	occupancy sensors	471	624	0	0	0	2.1	75	-	-	-	75	6.3
8	town hall	lighting upgrades	726	1,058	0	0	0	3.6	127	-	-	-	146	5.0
9	WWTP	heating system	108,177	-62,184	6,134	0	500	1,108.7	-8,084	18,402	-	1,300	10,282	10.5
10	WWTP	occupancy sensors	3,514	4,403	0	0	0	15.0	572	-	-	-	572	6.1
11	WWTP	variable speed drive	5,630	60,583	0	0	0	207.0	7,876	-	-	-	7,876	0.7
12	Muni Building	building envelope	13,835	3,954	0	1,252	0	142.5	475	-	1,816	-	2,291	6.0
13	school	control system	7,305	0	0	3,793	0	390.7	-	-	5,462	-	5,462	1.3
14	school	building envelope	28,741	0	0	4,684	0	482.4	-	-	6,745	-	6,745	4.3
15	school	occupancy sensors	16,721	31,824	0	0	0	108.3	4,233	-	-	-	4,233	4.0
16	Senior Center	scope audit items	300	0	0	0	0	0.0	-	-	-	-	-	0.0
17	TOTALS:		199,753	42,742	7,021	11,122	500	2,736	5,572	21,062	16,223	1,300	42,933	4.7

Energy Unit Costs		
Electricity	\$	0.150 /kWh
Gas	\$	1.50 /therm
Oil	\$	2.00 /gallon



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Program Administrator Incentives

- Custom
- Prescriptive
 - Lighting systems & controls
 - High-efficiency heating equipment
 - High-efficiency gas water heaters
 - Chillers
 - Energy management systems
 - High-efficiency air compressors
 - Gas-fired commercial kitchen equipment
 - Motors


Variable speed drives



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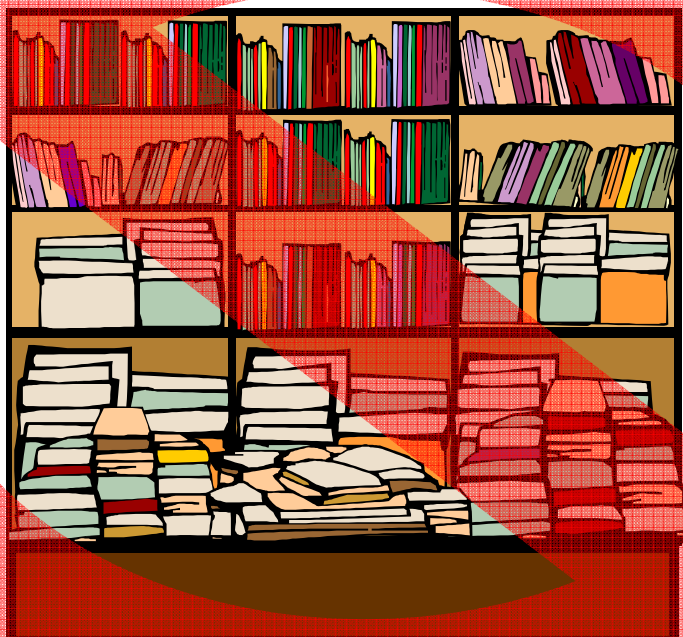


Making the Most of An Energy Audit

1. Track your energy usage
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4. Conduct an audit
-  **5. Create a plan**
6. Implement



What Not to Do With An Energy Audit



Create a Plan

- Meet with the auditor, Program Administrators, account executive and your finance person to understand all recommendations
- Decision factors:
 - Simple payback
 - Funding & incentives availability
 - Cost of inaction
 - Coordination with maintenance and capital plans
- Make your case by knowing your audience



Create a Plan: Harvard's Energy Reduction Plan

Building	Project	Project Cost	Alternate Funding \$	Alternate Funding Source	Cost to Harvard \$	Annual Savings \$	Pay Back (Town)	Est Annual Energy Savings MMBtus	Date	Status
FY10										
HES	New Boiler/Burners - Conv to Gas	\$ 30,000	\$ -	None	\$ 30,000	\$ 10,000	3.0	1007	Dec-09	Complete
Bromfield	Lighting Efficiency Upgrade	\$ 114,495	\$ 68,229	NGrid	\$ 46,266	\$ 19,036	2.4	464	Aug-09	Complete
HES	Lighting Efficiency Upgrade	\$ 32,687	\$ 22,881	NGrid	\$ 9,806	\$ 5,673	1.7	174	Dec-09	Complete
Subtotal							1646			
FY11										
Town Bldgs	Lighting Efficiency Upgrade	\$ 22,510	\$ 15,757	NGrid	\$ 6,753	\$ 4,318	1.6	133	Oct-10	DPW, Town Hall, Old Library, Police, Bromfield House
Bromfield High School	Mechanical Upgrades - DCV, BAS Upgrade, Retrocommissioning, RTU Fan VSDs	\$ 139,023	\$ 42,212	NGrid	\$ 96,811	\$ 48,033	2.0	2067	Dec-10	Ngrid Audit Nov-08
Bromfield High School	Mechanical Upgrades - Options - Boiler HW VSDs, Pneumatic Controls Conversion	\$ 45,466	\$ 17,400	NGrid	\$ 28,066	\$ 13,558	2.1	500	Dec-10	Ngrid Audit Nov-08
Hildreth Elementary School	Boiler HW VSDs and Digital Controls	\$ 53,199	\$18,300	NGrid	\$ 34,899	\$ 4,988	7.0	122	Dec-10	Ngrid Audit Nov-08
Subtotal							2821			
FY12										
Hildreth Elementary School	Mechanical Upgrades - DCV, New BAS, Retrocommissioning	\$ 100,000	\$ 30,000	NGrid	\$ 70,000	\$ 25,000	2.8	1196	Q4 2011	Ngrid Audit 2008
Fire Station	Replace Boiler	\$ 6,000	\$ -	Grant/Rebates	\$ 6,000	\$ 2,828	2.1	143	Q4 2011	EED Audit Jul-09
Town Hall & Fire Station	Insulation	\$ 9,000	\$ -	Grant/Rebates	\$ 9,000	\$ 3,779	2.4	180	Q4 2011	EED Audit Jul-09
Town Hall & Fire Station	Heating Controls - TownHall Heat Zones; FireStation Door Timer & Thermostats	\$ 3,300	\$ -	Grant/Rebates	\$ 3,300	\$ 4,555	0.7	200	Q3 2011	EED Audit Jul-09
Subtotal							1719			
FY13										
Police Station	HVAC / BAS+B1 Upgrade	\$ 27,000	\$ -	Grant	\$ 27,000	\$ 11,490	2.3	418	Q4 2012	EED Audit Jul-09
Public Library	Recommission BAS	\$ 15,000	\$ -	Grant	\$ 15,000	\$ 5,209	2.9	244	Q1 2013	EED Audit Jul-09
Totals w/o FY14		\$ 638,397	\$ 255,486		\$ 382,901	\$ 159,545	2.4			
Subtotal							663			



Helping Massachusetts Municipalities Create A Greener Energy Future



Poll

- How much do you agree with this statement:
We have a fiscal crisis and cannot afford to
address energy efficiency right now.
- A. Completely
- B. A little
- C. Not at all



ENERGY STAR® Cash Flow Opportunity Calculator



- How much new energy efficiency equipment can be purchased from the anticipated savings?
- Should this equipment purchase be financed now or is it better to wait and use cash from a future budget?
- Is money being lost by waiting for a lower interest rate?

http://www.energystar.gov/index.cfm?c=business.bus_internet_presentations_selfguided



Funding

Build Support:

- Operating budget

Implement Specific Measures:

- Capital plan
- Program Administrator incentives

General Overhauls:

- Performance Contract
- On-bill/Third-party financing
- Municipal bond
- Program Administrator incentives
- State / Federal grants

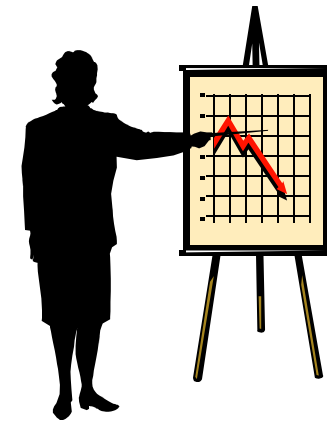


Helping Massachusetts Municipalities Create A Greener Energy Future



How to Build Support for Energy Efficiency

- Join the half of Mass municipalities that have had an energy audit since 2008
- Save money
- Demonstrate community fiscal responsibility
- Save municipal jobs
- Increase energy independence and security
- Create local construction jobs
- Improve occupant/worker comfort and productivity



Marshfield Reaches Out

Visual Tour of the Marshfield Fire Station



<http://www.blip.tv/file/4036590>

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Making the Most of An Energy Audit

1. Track your energy usage
2. Discuss your goals, resources and potential funding sources
3. Meet with your Program Administrators/utilities to define the audit services
4. Conduct an audit
5. Create a plan



6. Implement



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Reinvest in Energy Efficiency



- Energy efficiency is a continual process
- Reinvestment validates participants' commitment
- Account for incentives
 - To general fund?
 - To participating department(s)?
- Plan to reinvest
 - Document your savings
 - Share your success story
 - Revolving loan fund
 - Rewards to departments



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- Promote your success & inspire your community
- Reading:
 - Energy Performance Contract
 - Public education and awareness campaigns
 - Blog
 - Lighting audits by schoolchildren
 - Home energy conservation competition for middle schoolers



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Franklin: Re-investing in EE

2006 Schools
Audit

- 40 efficiency measures (5 VFDs, 20 CO₂ demand control, 15 lighting)
- 396,083 kWh + 25,560 therms natural gas
- Net Cost \$181,801 / savings \$77,156 = 2.4 year payback

2007-2008
Implementation

- Goal was 10% energy savings
- Benchmark: compare energy use FY07 vs FY10
- Saved 9-18% electricity and 0-27% gas



Horace Mann Middle

2010 Schools
Audit

- Identified more potential energy savings (HW pumps, CO₂ demand control)
- 151,235 kWh + 98,711 therms natural gas
- Net cost \$137,153 / savings \$168,963 = 0.8 year payback

2011 and
beyond

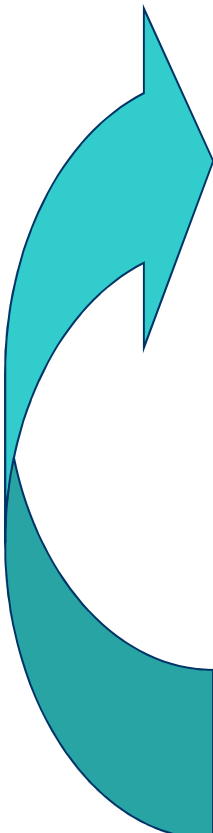
- Implement identified measures
- Walk-in coolers
- Next few years, general LED lighting



Parmenter Elementary



How DOER Can Help

- 
1. Track your energy usage
MassEnergyInsight
 2. Discuss your goals, resources and potential funding sources
Share success stories and lessons learned
 3. Meet with your Program Administrators/utilities to define the audit services
Regional Coordinators attend kick-off and action meetings
 4. Conduct an audit
Information on common measures
 5. Create a plan
Energy Management Procurement Assistance
 6. Implement
Green Communities Grants



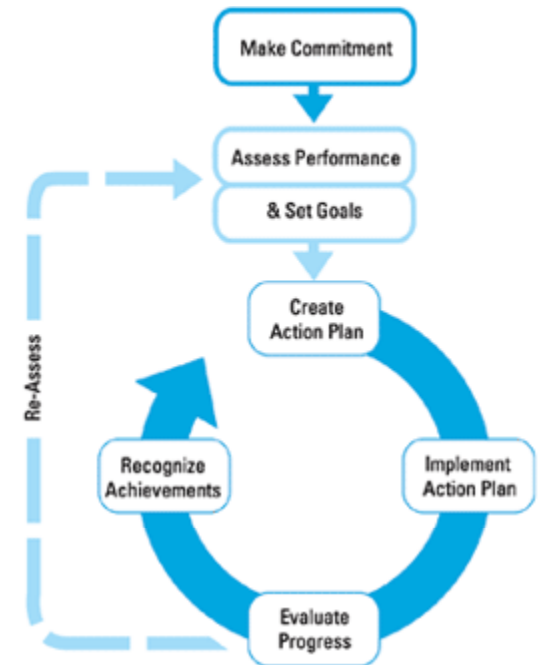
DOER & DEP Contacts

- Performance Contracts:
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 - Michael DiBara at MassDEP: Michael.DiBara@state.ma.us
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 - Central: Kelly.Brown@state.ma.us
 - Western: Jim.Barry@state.ma.us



Resources

- Program Administrators
 - www.masssave.com
- EPA Energy Star
 - Local Government webcasts
 - <http://www.epa.gov/statelocalclimate/web-podcasts/local-webcasts.html#ee1>
 - Best Practices Checklist
 - http://www.energystar.gov/ia/business/downloads/BP_Checklist.pdf
 - Cash Flow Opportunity Calculator
 - http://www.energystar.gov/index.cfm?c=assess_value_financial_tools
 - Financing Energy Efficiency
 - http://www.energystar.gov/index.cfm?c=business_business_internet_presentations_selfguided
 - Computer Power Management
 - www.energystar.gov/powermanagement
- Northeast Energy Efficiency Partnerships O&M Guide for Public Schools
 - <http://neep.org/public-policy/buildings/high-performance-schools/omguide>
- Department of Energy ARRA Webcasts
 - <http://www1.eere.energy.gov/wip/solutioncenter/webcasts/default.html>



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THANK YOU!

- Aimee Powelka's contact information:
Aimee.Powelka@state.ma.us / 617-626-7356
- The webinar was recorded and will be available for viewing at your convenience on our website at:
www.mass.gov/energy/greencommunities
- The slide presentation will also be posted at:
www.mass.gov/energy/greencommunities



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